SECTION IX: TETSU-BISHI CONSTRUCTION

Photo 9.2

List 9.1: Construction Steps

Type A

1. Cut designs out of sheet metal or old cans.
2. Paint to camouflage (optional).
3. Sharpen points and edges if needed.
4. Attach pieces together by their slots.

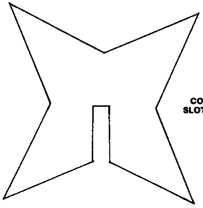
Type B

1. Fashion balls or cubes of available materials.
2. Insert sharp spikes.

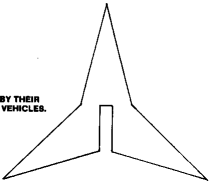
Tetsu-bishi, known to the western world as caltrops, are simple but effective weapons if they are used correctly. Type A caltrops can even be used against vehicles to flatten tires (see Photo 9.1), although in that case they should be at least 1/4" thick. Cut them out of sheet metal with a hacksaw. Normally they are carried separately to save space, and assembled only when needed, but they can be glued, wired, soldered, or welded together permanently if that is desired. They can be of any size. One of the more advantageous sides of the Type A design is that they can be used as shuriken as well.

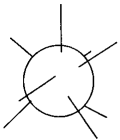
The Type B caltrop is not as durable, but it is easier to produce Tetsu-bishi of any size, and in great numbers. Small balls of hard putty or autobody filler are formed first. Then while they are still semisoft, sharp spikes made out of needles, or headless nails or pins or even wire are jammed into them. Wire or bolt cutters can be used to snip the heads off nails and pins. Sharpen the points on a file if necessary. Work fast, because most of the mentioned compounds dry quickly. Have everything else ready first. Dry the caltrops by sitting them up on small pegs or tubes. In that way, the spikes will not be moved out of place. No matter how a caltrop falls, one or more points should stick up.

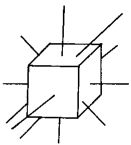
In a pinch, other substances can be used as Tetsu-bishi. Broken glass or marbles can be scattered over an area. Most people instinctively hesitate before walking across broken glass, and marbles will impede sure footing on smooth surfaces. To carry caltrops silently and safely, keep them in a box, padded and mixed up with straw, grass, or strips of paper or cloth. A variety of Tetsu-bishi are shown in Photo 9.2. A Ninja is shown assembling a four point Type A Tetsu-bishi in Photos 9.3 and 9.4.



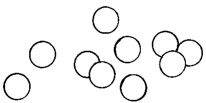
SHURIKEN TETSU-BISHI;
CONNECT TWO OF THEM TOGETHER BY THEIR SLOTS. THESE WILL STOP ANIMALS OR VEHICLES.







BALLS OR CUBES OF HARD PUTTY, BODY FILLER, OR RUBBER WITH SPIKES OF NEEDLES, WIRE, OR SMALL NAILS SHOVED INTO THEM.



MARBLES OR BALL BEARINGS TO TRIP UP PEOPLE AND ANIMALS, ESPECIALLY ON SMOOTH SURFACES.

NINJA TETSU-BISHI: CALTROPS 9.0

SECTION X:
NINJA SHURIKEN CONSTRUCTION

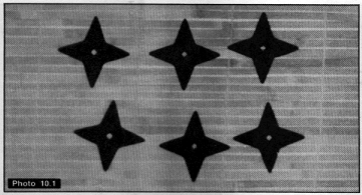


Photo 10.1

List 10.1: Construction Steps

Type A

1. Cut star designs out of 3/16" sheet metal with a hacksaw.
2. Drill center holes.
3. Sharpen points and edges if needed.
4. Paint to camouflage.

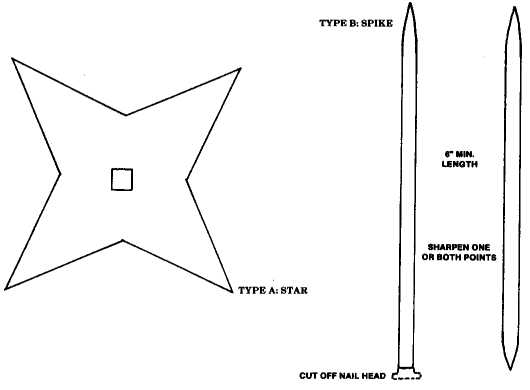
Type B

1. Cut the heads off nails that are at least 6" long.
2. Sharpen one or both ends.
3. Paint to camouflage.

Shuriken are Ninja throwing weapons. Type A is a throwing star (constructed in a manner similar to the Type A Testu-bishi), and Type B is a throwing spike (see Diagram 10.0).

To make Type A throwing stars, use a hacksaw to cut them out of 3/16" sheet metal. Make Type B throwing spikes by cutting the heads off nails which are six inches long or longer and by sharpening one or both ends. Photo 10.1 shows completed shuriken, and Photo 10.2 shows a Ninja prepared to throw a shuriken.

Photo 10.2



NINJA SHURIKEN 10.0

SECTION XI:
NINJA NUNCHAKU CONSTRUCTION

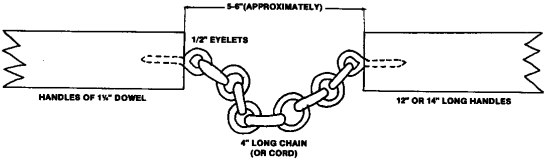
Photo 11.1

List 11.1: Construction Steps

1. Cut Nunchaku handles to desired length (12" or 14") out of 1¼" diameter wooden dowel rod. Harder woods make better weapons.
2. Insert and glue in 1/2" eyelets into an end of each handle.
3. Attach the handles with a 4" length of chain (or use nylon cord if chain is not available, using enough cord to tie secure knots).
4. Paint to camouflage.

The Nunchaku primarily consists of two rods joined together by a short length of cord or chain (see Diagram 11.0). Some people feel that longer handles (14") make Nunchaku easier to manipulate, but standard Nunchaku have 12" long handles. Handles are 1¼" in diameter normally, but 1" handles will work well also. The eyelet should be glued into the handle to keep it from being pulled out. If cord is used in place of chain, use enough cord to tie the cord onto the eyelets with secure knots. Excess cord can be cut off. With extended use, cord will wear out faster than chain. Photo 11.1 shows a finished pair of Nunchaku, and Photo 11.2 shows a Ninja using the Nunchaku.

Photo 11.2



NINJA NUNCHAKU 11.0

APPENDIX A: TYPES OF METALS USED FOR WEAPONS: METALLURGY

This book is primarily designed to allow anyone to construct inexpensive and functionable weapons from any available materials. These weapons are meant to be disposable. Others, however, may wish to construct finer weapons out of better materials. The first concern, therefore, is the type of metal used in making the weapon.

Metallurgy is a complex area of knowledge, but a number of brief suggestions shall be given concerning more desirable construction materials. This information is not comprehensive, but it will give the weapons maker an intitial point of reference from which to start. In an oversimplified view, quality metals for weapons are either of two kinds: carbon or alloy steels.

Carbon Steels (tool steels)

Low carbon steels: .02-.30% carbon content.
Medium carbon steels: .30-.60% carbon content.
High carbon steels .60-1.7% carbon content.

Carbon steels are plain, harder steels, normally used commercially. The higher the carbon content, the harder the steel (and also the more difficult it is to cut and work with). Carbon content also determines how the metal will be affected by heat treating.

Alloy Steels

Chrome Vanadium Steel
Characteristics: superb hardness, strength, workability, and resistance to corrosion.

Stainless Steel (chromium or nickel chromium steels)

1. 440C stainless steel
2. 154CM stainless steel

These are two of the finest.
Characteristics: hardness and a superb ability to resist corrosion, heat, salts and acids.

Molybendum Steel

Characteristics: increased strength and resistance to heat.

Tungsten Steel

Characteristics: superb hardness, even at high temperatures.

The quality of an alloy steel depends upon the alloy content. Further discussion of this metal, however, can become very technical and complex. For a semitechnical and more comprehensive discussion of metallurgy, consult your local library. Any of the carbon or alloy steels mentioned above will work well.

APPENDIX B: HEAT TREATING

There are three types of heat treating: 1) Hardening, Annealing, 3) Tempering. The first two procedures are highly technical and require extremely expensive equipment. Realistically, only tempering can be performed by an individual with simple tools.

Tempering hardens a blade and makes it less brittle. It can be performed with a propane torch. In a safe area, heat the blade to one of three colors: brown, purple, or blue (ONLY IF IT IS CARBON STEEL). Then quench the metal in cool water. If, when heated, the steel turns dark blue or black, the metal has been heated too much. The metal must be cooled and the process must be repeated. This procedure will not work for alloy steels, however, and for all intents and purposes, alloy steels should not be tempered by nonexperts.

Safety is a major concern when tempering metal. Do not use a propane torch if you are not skilled in using one. Do not use a torch around combustible materials. Most importantly, extremely hot metals can cause very severe burns if they come into contact with human skin even momentarily. Hold the metal securely in vise grips or a vise. Never touch the metal directly. Wear eye protection.

APPENDIX C: SHARPENING BLADES

Most of the weapons in this book can be given a fine edge with a mill bastard file. Swords and knives, however, will need to be as sharp as possible. Shape the edges at first by putting the blades in a bench vise and using a mill bastard file. Then, using an oilstone, finish the edge at a 20 degree angle, using the same number of strokes on each side of the blade. For a knife, try to shave off an imaginary layer of stone, using the entire edge with each stroke of the knife. The armor piercing point must be sharpened separately.

Possibly, for a sword, and especially if the oilstone is small, it is better to run the stone along the blade. In either case, one should be careful not to cut oneself. There are also numerous sharpening devices commercially available, such as two crossed ceramic sticks, which will put a fine edge on a blade of any length. A blade can be considered sharp enough when it will cut smoothly through a single sheet of newspaper. All blades should be sharpened periodically. For best results when sharpening, keep a thin film of oil on the blade edge.

AFTERWORD

Always keep in mind the Ninja concept of *all weapons and no weapons.* In order to truly be the master of your destiny, you must master all weapons and yet be dependent on no weapon. Thus the true Ninja becomes a living weapon: undefeatable. Once you have learned this lesson, you are close to the mastery of the Silent Way.

Toshitora Yamashiro
Grandmaster
The Nine Shadows of the Koga Ninja

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